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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,913	08/18/2003	Carmen M. Salvino	P-69.19(CON)	3186

25555 7590 03/22/2005

JACKSON WALKER LLP
2435 NORTH CENTRAL EXPRESSWAY
SUITE 600
RICHARDSON, TX 75080

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/642,913

Applicant(s)

SALVINO, CARMEN M.

Examiner

Rabon Sergent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. It is requested that applicant amend the continuing data within the specification to reflect the current status of the parent application.
2. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Given that the instant claim set differs radically from the claim set previously examined, the examiner has not found clear support for every limitation of the instant claims; therefore, applicant is required to indicate where support exists for the limitations set forth within the claims.
3. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant has failed to specify the type of molecular weight (number average or weight average) for the polyurea. This information is necessary in order to adequately identify the polymer.
4. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Within claims 1 and 18, applicant has failed to specify the type of ratio (i.e.; weight or molar) for the amine and isocyanate reactants. Furthermore, it is unclear if the ratio is amine:isocyanate or isocyanate:amine, and it is further unclear if the ratio is between compounds or functional groups.

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Within claims 1 and 18, it is unclear what is meant by the language, "evenly distributed".

Within claims 4, 13, and 21, the amine species, n-aminoethylpiperazine, is a heterocyclic compound; therefore, referring to this compound as an aliphatic is ambiguous.

Within claims 5, 8, 10, 14, 17, 18, 22, and 25, the bases for the claimed weight and volume percent values have not been specified. For example, it is unclear if the weight percent of claim 5 is based upon the total weight of the composition.

Within claim 10, it is unclear what constitutes a predetermined amount; it cannot be determined what limitation is conveyed by the word, "predetermined".

Within claim 10, applicant has specified a "precursor"; however, it is unclear what component term represents.

Within claim 10, the last step of the process is confusing, because applicant states that the isocyanate and precursor are introduced to the epoxy; however this step appears earlier in the claim. Furthermore, it is unclear what limitation is being set forth within the last two lines of claim 10; the language, "said precursor to said epoxy resin polymerizing to form said epoxy resin", cannot be understood. Also, the method steps do not allow for the addition of the particulate filler.

Within claims 6, 15, and 23, it is unclear what the weight limitation refers to; is it a molecular weight or equivalent weight?

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed.

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Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-26 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 11/042,247. Although the conflicting claims are not identical, they are not patentably distinct from each other because each set of claims is drawn to a polymer composition comprising an epoxy component, a polyurea component, and a filler component in equivalent amounts, wherein the polyurea has a molecular weight of 200 to 2,000 g/mole and is formed by reacting an amine and isocyanate in a ratio of 1:10 to 1:40. The respective claims are also drawn to a bowling ball made from the composition and a method of making the composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orlando et al. ('967) in view of Goel ('424) or LeCompte et al. ('433) or Lenke et al. ('231) or Magrans, Jr. ('020).

Orlando et al. disclose the production of bowling balls, wherein epoxy resins are disclosed as being suitable polymers for producing the balls. See column 3, line 18. Orlando et al. further stresses that the polymer system constituents, while initially of low viscosity, must thicken or gel rapidly, once mixed, so as to prevent the fillers from becoming unevenly distributed. See column 6, lines 57+ and column 8, lines 12+.

9. While the primary reference fails to disclose the addition of urea thickeners to the epoxy resins to rapidly increase the initial viscosity of the polymer composition, the position is taken that the use of urea thickeners, produced *in situ*, with reactive polymeric systems, including epoxide systems, was known at the time of invention. This position is supported by the teachings of the secondary references. See abstract and column 2, line 22 within LeCompte et al. See abstract and column 5, lines 25+ within Goel. See abstracts within Lenke et al. and Magrans, Jr. Goel specifically discloses at column 3, line 39 the use of amines such as amino ethyl piperazine within his epoxy systems. Furthermore, one seeking to increase the reaction rate (and hence the viscosity build-up) of the system would have been motivated to utilize more reactive aliphatic amines, as opposed to aromatic amines. LeCompte et al. specifically disclose the use of plasticizers at column 7, lines 3+. It has been held that it is obvious to utilize a known component for its known function; therefore, since applicant's claimed amines and plasticizers

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were known components of systems analogous to those of applicant, the position is taken that it would have been obvious to utilize them for their known functions. In re Linder, 173 USPQ 356. In re Dial et al., 140 USPQ 244. With respect to applicant's claimed volume and weight percents, the position is taken that the selection of such quantities amounts to the obvious optimization of result effective variables. By means of routine experimentation, it would have been obvious to determine the quantities of components that yield optimum properties or characteristics.

10. Therefore, in view of the recognition within Orlando et al. that rapid thickening of the polymer composition is advantageous for the production of uniform bowling balls and in view of the fact that urea thickeners were known to be useful for building viscosity within polymer systems, such as epoxy systems, the position is ultimately taken that it would have been *prima facie* obvious to utilize *in situ* produced urea thickeners within the epoxy system of Orlando et al., so as to obtain a system which promotes the uniform distribution of fillers within the cured polymer.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
March 16, 2005